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Two New Species of the Genus *Meroplius* RONDANI (Diptera, Sepsidae) from the Oriental Region[1,2)]

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Abstract Two new species of the sepsid genus *Meroplius* RONDANI, namely *M. mirandus* and *M. elephantis*, are described from Nepal and Thailand, respectively. An identification key to the Oriental species of *Meroplius* is given.

Key words: Diptera; Sepsidae; *Meroplius*; new species; Nepal; Thailand.

Introduction

The genus *Meroplius* was first erected by RONDANI (1874) and revised by DUDA (1926), HENNIG (1949) and ZUSKA (1972). At present time, this genus is known from all zoogeographic regions and comprises nine species (ZUSKA, 1977, 1980; ZUSKA and PONT, 1984; OZEROV, 1985; SILVA, 1990). According to ZUSKA (1972), three species are known to occur in the Oriental Region. The adult flies are frequently found on excrement, dung, manure heap and other decaying matter.

During the survey of medically important flies in Nepal in 1992, I obtained a *Meroplius*-species which is distinctly different from any other known species. Furthermore, I also found an undescribed *Meroplius*-species in recent examination of dung-frequenting acalypeterate flies collected by Dr. T. HAYASHI in 1989 in Thailand. In the present paper, I describe these two new species and give an identification key to the species of the genus *Meroplius* in the Oriental Region.

Key to the species of the genus *Meroplius* in the Oriental Region

1. All pleura with rough sculpture, subshining. ♂: distal one of two stout ventral spines of fore femur triangular in shape and pointed apically; surstylus long and curved, with heavy setae posteriorly. ♀: fore femur with a ventral seta. ..... *M. sauteri* (DE MEIJERE)

— All pleura with fine sculpture, shining. ♂; distal one of two stout ventral spines of fore femur spatulate or club-like; surstylus without heavy setae posteriorly.

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♀: fore femur with 1 or 4 to 5 ventral setae 2

2. Fronto-orbital setae vestigial. ♂: distal one of two stout ventral spines of fore femur without tubercle at base and with a thorn-like spine at its posterior side; surstylus short, stout, and with short setae posteriorly and without long hairs ventrally. ♀: fore femur with 4–5 ventral setae in a line at distal one-third ..... *M. beckeri* (DE MEIJERE)

— Fronto-orbital setae developed. 3

3. Sternopleuron widely silvery pruinose posterodorsally. ♂: distal one of two stout ventral spines with tubercle at base and gently curved outward and inner one slender with 3 small spinules at its posterior side (Fig. 7); surstylus short, thick, and with short setae posteriorly and long hairs ventrally (Figs. 10–11). ♀: fore femur with 4 short ventral setae in a line at distal one-third. ..... *M. elephantis* n. sp.

— Sternopleron silvery pruinose only in posterodorsal margin. 4

4. Wing distinctly tinged with grey. ♂: distal one of two stout ventral spines angularly bent outward; surstylus slender and apically widened, and a sharp anteroventral process. ♀: fore femur with 1 ventral seta at distal one-third. ..... *M. fasciculatus* (BRUNETTI)

— Wing hyaline, slightly tinged with brown. ♂: distal one of two stout ventral spines inclined outward and not angularly bent (Fig. 1); surstylus distinctly forked and its ventral one furthermore bifurcate (Figs. 4–5). ♀: fore femur with 1 ventral seta at distal one-third (Figs. 2). ..... *M. mirandus* n. sp.

Meroplius mirandus n. sp.

(Figs. 1–5)

Male. Head: eyes reddish brown; frons black and shining; face dark brown with a longitudinal yellowish line; gena and occiput black and thinly pruinose; all antennal segments dark brown; arista black and bare; vibrissal angle 1 developed seta; genal lower margin with 13–14 peristomal setae in a line; 1 *oc*, 1 *or*, 1 *vti*, 1 *vte*, 1 *pvt*.

Thorax: wholly black; mesonotum thinly pruinose with 3 to 4 pairs of short setae in acrostichal line; propleuron thinly pruinose anteriorly; mesopleuron and pteropleuron shining; sternopleuron shining and silvery pruinose only in posterodorsal margin; hypopleuron, metanotum, scutellum and postscutellum subshining; 1 *h*, 2 *n*, 1 *dc*, 1 *sa*, 1 *pa*, 1 *m*, 1 *ap sc*; *b sc* vestigial.

Wings: hyaline, slightly tinged with brown; veins dark brown; humeral cell light brown; alula without a distinct posterodistal lobe, and with microtrichia marginally; halteres yellowish white, darkened basally.

Legs: all coxae and trochanters yellow; fore femur yellow with 2 stout ventral spines at apical one-third, and distal one of them thick and inclined outward (Fig. 1); middle and hind femora dark brown with yellow rings basally; fore tibia yellow,

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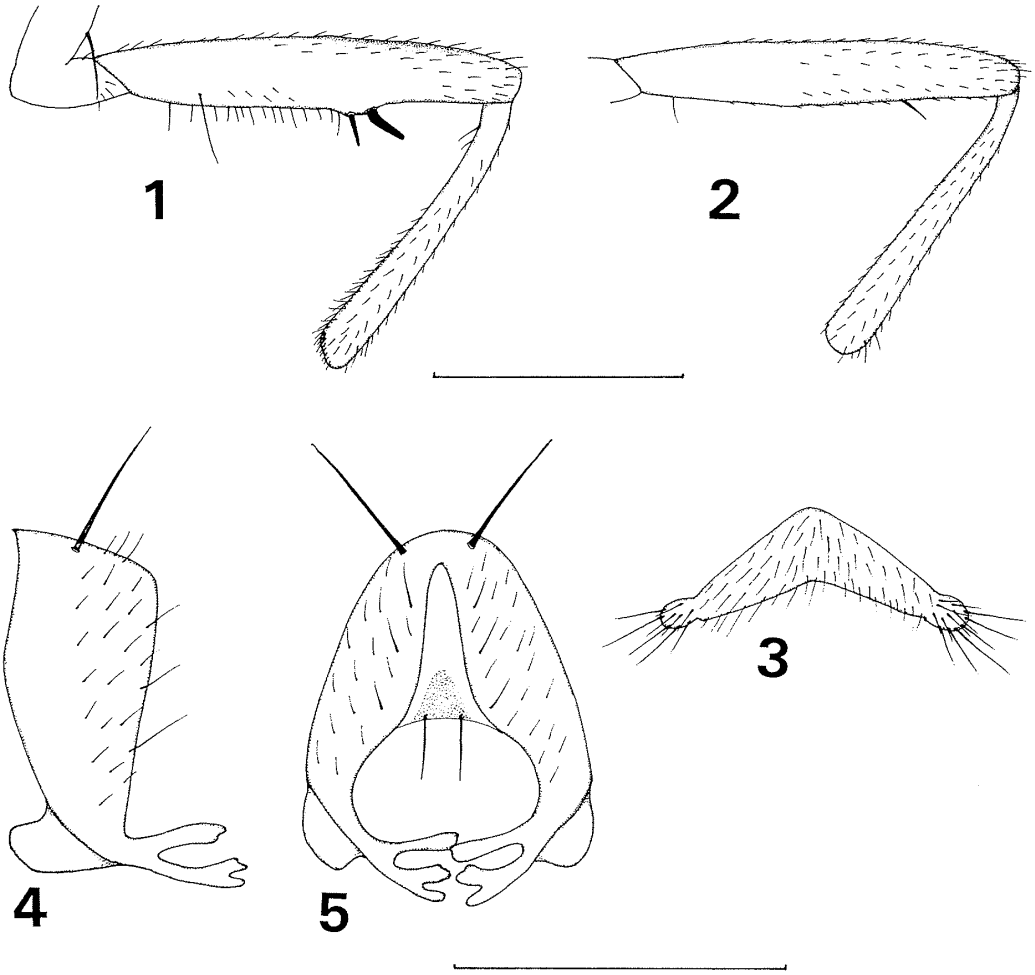

Figs. 1–5. *Meroplius mirandus* n. sp. —— 1, Male fore femur and tibia, anterior view (left); female fore femur and tibia, anterior view (left); 3, male 4th sternite; 4, male hypopygium, lateral view (left); 5, ditto, posterior view. Scales: 0.5 mm.

middle and hind tibiae dark brown without a distinct osmeterium; 1st tarsal segment yellow and 2nd to 5th segments dark brown in all tarsi.

Abdomen: black and shining; tergites sparsely clothed with short setae; 2nd segment not constricted posteriorly; 4th sternite boomelang-shaped with a pair of bristly tufts (Fig. 3); epandrium large with branchial plate ventrally and surstylus forked and its ventral one furthermore bifurcate (Figs. 4–5).

Female. Fore femur without stout spines as in male, with only 1 short vetral seta at apical one-third; other characters same as those of female.

Body length: ♂♀, 3–3.3 mm.

Holotype: ♂, Simigaon (2,150 m)–Jagat (1,250 m), Rolwaling Valley, Nepal, 23 Oct 1992, M. IWASA (preserved in Obihiro University of Agriculture and Veterinary Medicine). Paratypes: 2 ♂, 1 ♀, same data as holotype.

Distribution. Nepal.

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Remarks. This species seems to be related to *M. fasciculatus* (BRUNETTI), but differs from it in the characters mentioned in the key. Especially, the morphological features of male hypopygium of this species are characteristic and bear no resemblance to those of any other known species of *Meroplius*. The adult flies were collected by carrion bait trap.

Meroplius elephantis n. sp.

(Figs. 6–11)

Male. Head: eyes reddish brown; frons black and shining; face dark brown; gena and occiput black and thinly pruinose; 1st antennal segment dark brown, 2nd to 3rd segments reddish brown; arista black and bare; vibrissal angle with 1 developed setae; genal lower margin with about 20 peristomal setae in a line; 1 *oc*, 1 *or*, 1 *vti*, 1 *vte*, 1 *pvt*.

Thorax: wholly black; mesonotum thinly pruinose; propleuron thinly pruinose anteriorly and shining posteriorly; mesopleuron shining and thinly pruinose only in posterior margin; pteropleuron thinly pruinose; sternopleuron shining anteroventrally and widely silvery pruinose posterodorsally; metapleuron almost shining and subshining in posterior small part; hypopleuron, metanotum, scutellum and postscutellum subshining; 1 *h*, 2 *n*, 1 *dc*, 1 *sa*, 1 *pa*, 1 *m*, 1 *ap sc*; *b sc* vestigial.

Wings: hyaline, slightly tinged with brown; veins dark brown; humeral cell and basal part of costal cell light brown; alula without a distinct posterodistal lobe and with microtrichia marginally; halteres yellowish white, darkened basally.

Legs: all coxae and trochanters yellow; fore femur yellow with two stout ventral spines diverged from basal tubercles at apical one-third (Fig. 6), these spines almost parallel and distal one more thick and gently curved outward and inner one slender with 3 small spinules at its posterior side (Fig. 7); middle and hind femora dark brown with yellow basal rings; fore tibia ventrally hollowed at near basal one-third (Fig. 6); middle and hind tibiae dark brown without a distinct osmeterium; 1st and 2nd segments yellow and 3rd to 5th segments dark brown in fore and middle tarsi; hind tarsi all dark brown.

Abdomen: black and shining; tergites sparsely clothed with short setae; 2nd tergites not constricted posteriorly; 4th sternite round without peculiar bristly tufts (Fig. 9); epandrium large and surstylus short, thick and with short setae posterioly and long hairs ventrally (Figs. 10–11).

Female. Fore femur without stout ventral spines as in male, and with 4 short ventral setae in a line at apical one-third (Fig. 8); other characters same as those of male.

Body length: ♂♀, 4–4.5 mm.

Holotype: ♂, Chiang Dao, North of Chaing Mai, Thailand, 13 Aug. 1989, T. HAYASHI (preserved in Obihiro University of Agriculture and Veterinary Medicine). Paratypes: 3 ♂, 2 ♀, same data as holotype.

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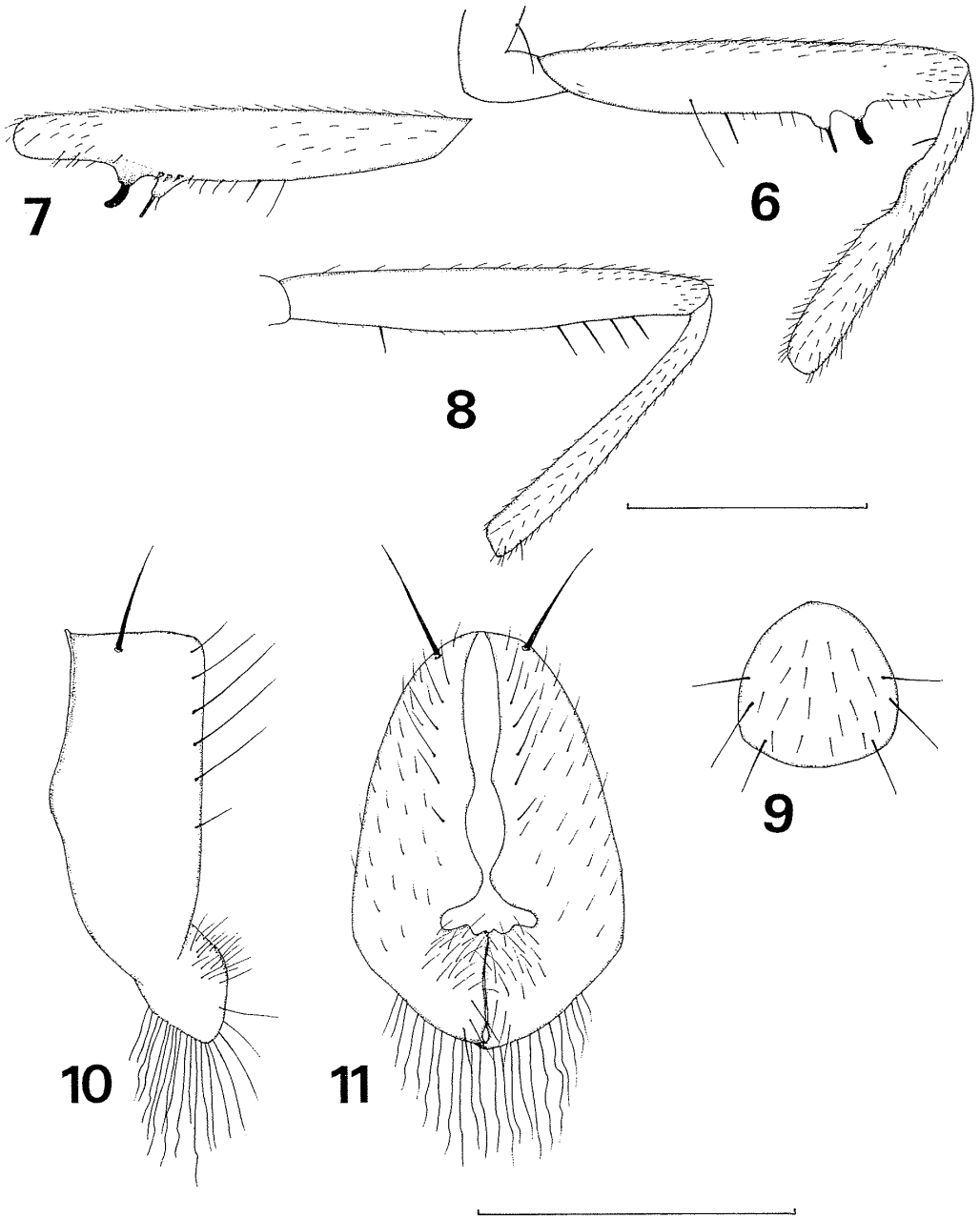

Figs. 6–11. *Meroplius elephantis* n. sp. —— 6, Male fore femur and tibia, anterior view (left); 7, male fore femur, posterior view (left); 8, female fore femur and tibia, anterior view (left); 9, male 4th sternite; 10, male hypopygium, lateral view (left); 11, ditto, posterior view. Scales: 0.5 mm.

Distribution. Thailand.

Remarks. This species is closely related to *M. beckeri* (DE MEIJERE) which is distributed in India and Bangladesh, but differs from it in the characters of fronto-orbital setae, male fore femora and male hypopygium as mentioned in the key.

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The adult flies were collected from the elephant dung.

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